UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/679,261	10/04/2000	Bruce L. Davis	60303	7123

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EXAMINER
LIANG, REGINA

ART UNIT	PAPER NUMBER
2674	

DATE MAILED: 02/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

Office Action Summary	Application No.	Applicant(s)
	09/679,261	DAVIS ET AL.
	Examiner	Art Unit
	Regina Liang	2674

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *22 December 2003*.

2a) ☒ This action is **FINAL**.   2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1,3-5,8-10 and 12-24* is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1,3-5,8-10 and 12-24* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a) ☐ All   b) ☐ Some * c) ☐ None of:

   1. ☐ Certified copies of the priority documents have been received.

   2. ☐ Certified copies of the priority documents have been received in Application No. _____.

   3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *14*.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

1.   The IDS filed on 12/22/03 was submitted after a first Office action but before mailing of

a final Action and with a fee as set forth in 37 CFR 1.17(p), and the IDS has been considered by

the examiner. The current Office action is a Final rejection and is appropriate as set forth in

MPEP § 609(B)(2)(i).

Claim Rejections - 35 USC § 112

2.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of
> making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to
> which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth
> the best mode contemplated by the inventor of carrying out his invention.

3.   Claims 1, 3-5, 8-10, 12-24 are rejected under 35 U.S.C. 112, first paragraph, as failing to

comply with the written description requirement. The claim(s) contains subject matter which

was not described in the specification in such a way as to reasonably convey to one skilled in the

relevant art that the inventor(s), at the time the application was filed, had possession of the

claimed invention.

As to claims 1, 3, 4 and 8, applicant refers to circuitry coupled to the sensor that produces

multi-bit information. Applicant refers the circuitry coupled to the sensor for processing signals

from the sensor and producing corresponding multi-bit binary output data decoded from said

indicia, and the circuitry is integrated on a common substrate with the sensing elements.

Applicant also refers to a transfer means -either a cable or wireless link, for relaying the output

data. But applicant does not provide support in the disclosure for these elements. Page 1 of the

specification mentions "device includes a multi-element CMOS optical sensor integrated on an

IC.... processing circuitry ... tracks movement of patterns across the sensor's field of view". Then

page 3 mentions "wireless links ... freeing the user from the constraint imposed by the cable".

The disclosure does not provide sufficient support for these elements because there is no

description detailing how these elements are implemented or perform the function respectively

claimed.

As to claim 5, applicant refers to a decoder for discerning steganographically-encoded

information. But applicant does not provide support in the disclosure for this element. Page 4 of

the specification mentions "The Bedoop detection system... decodes same to extract the

steganographically-embedded data hidden therein." The disclosure does not provide sufficient

support for the decoder because there is no description detailing how it is implemented and

performs the function as claimed.

As to claim 9, applicant refers to optically encoded information that comprises a plural-

bit identifier. But applicant does not provide support in the disclosure for this element. Page 2

of the specification mentions "Bedoop data ... optionally with data identifying the consumer".

The disclosure does not provide sufficient support for this identifier because there is no

description detailing how it is implemented.

As to claim 10, applicant refers performing a steganographic decoding process. But

applicant does not provide support in the disclosure for this element. Page 4 of the specification

mentions "The Bedoop detection system... decodes same to extract the steganographically-

embedded data hidden therein." The disclosure does not provide sufficient support for the

steganographic decoding process because there is no description detailing how it is implemented

and performs the function as claimed.

As to claims 14, 24, applicant refers to the plural-bit data is associated with an internet address; applicant also refers to downloading data to the computer from the internet address. But the disclosure does not provide support for the elements as claimed.

As to claims 15, 16, 17, 23, the specification does not provide support for "the peripheral device includes a user interface control", "performing said steganographic decoding process only when said control is activated by a user", and "steganographic decoding is performed by apparatus within the peripheral". Page 4 of the specification merely mentions "The Bedoop detection system... decodes same to extract the steganographically-embedded data hidden therein". The disclosure does not provide sufficient support for the user interface control and the steganographic decoding process only when the control is activated by a user because there is no written description detailing how it is implemented and how to perform the function as claimed.

As to claim 18, the specification does not provide support for "plural bit data from said decoding is transmitted, by wireless transmission, to an apparatus remote from the peripheral". Page 3 of the specification merely mentions "wireless links ... can of course be used, freeing the user from the constraint imposed by the cable". The disclosure does not provide sufficient support for "plural bit data from said decoding is transmitted, by wireless transmission, to an apparatus remote from the peripheral" as claimed since there is no description detailing how it is implemented and how to perform the function as claimed.

As to claim 19, 20, the specification does not provide support for "at least part of said optical sensor data is transferred from the peripheral, and said steganographic decoding is performed on said data in apparatus remote from said peripheral" and "said optical sensor data is transferred from the peripheral to said remote apparatus by wireless transmission". Page 2 of the

specification merely mentions "The optical data collected by the sensor can be processed within

the peripheral's processor to extract the steganographically encoded binary Bedoop data

therefrom. Or this processing burden can be undertaken by the associated computer system, with

the peripheral simply processing and formatting the raw sensor data into sequential frames of

image data to be output to that system". The disclosure does not provide sufficient support for

the limitation as claimed because there is no description detailing how it is implemented and how

to perform the function as claimed.

Claim Rejections - 35 USC § 103

4.   Claims 1, 3, 4, 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Dougherty et al (US. PAT. NO. 6,256,638 hereinafter Dougherty) in view of Faulkerson (US.

PAT. NO. 4,804,949).

As to claim 1, Dougherty discloses a peripheral device for use with a computer system

including a housing (12), an optical sensor (13) having sensing element and producing image

signals, a circuitry (14, 20) coupled to the sensor and disposed within the housing for processing

signals from the sensor and producing corresponding output data (col. 5, lines 14-20 for

example), transfer means (16) for relaying the output data from the device to the computer

apparatus (col. 5, lines 20-22 for example), wherein the sensor is useful is acquiring optical-

encoded multi-bit information (col. 3, lines 9-13 for example) from the medium (30) for use by

the computer system. Dougherty does not explicitly disclose the housing is adapted to fit within

a user's palm and the optical sensor having plural sensing elements and a lens for imaging the

medium onto the sensor. However, it is old and well known in the art that a hand-held optical

scanner having a housing adapted to fit within a user's palm (see Fig. 1 of Faulkerson) and the

optical sensor comprising plural sensing elements (27 for capturing successive optical image

frames) and a lens (29F) for imaging the medium onto the sensor. Thus it would have been

obvious to one of ordinary skill in the art at the time the invention was made to modify the

peripheral device of Dougherty to be adapted to fit within the user's palm suitable for hand-held

use, and the optical sensor to have plural sensing elements and a lens as taught by Faulkerson for

directed directed reflected light from the medium to sensing elements so as to provide a hand-

held optical scanner device useful for optical sensing machine readable medium and to provide

electrical image signals representative of the images.

As to claim 3, Dougherty teaches the transfer means is a wireless link (e.g., col. 5, lines

25-28).

As to claim 4, Dougherty teaches the circuitry (14,20) within the housing analyzes the

image signals and produces multi-bit information corresponding thereto (e.g., col. 5, lines 14-

20).

As to claim 9, Bejnar teaches the bar code system comprising a plural-bit identifier (e.g.,

col. 1, lines 6-9).

5.   Claims 5, 10, 12-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Dougherty and Faulkerson as applied to claim 1 above, and further in view of Rhoads (US.

PAT. NO. 5,841,886).

As to claims 5 and 10, Dougherty as modified by Faulkerson does not disclose the

circuitry performing a steganographic decoding process on the optical sensor data. However,

Rhoads teaches a printed material comprising a steganographically-encoded information, and a

scanner having a circuitry comprising a decoder for discerning steganographically-encoded information represented in the image signal (e.g., col. 6, line 44 to col. 8, line 5) for security purposes. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the decoding circuitry of Dougherty as modified by Faulkerson to perform a steganographic decoding process on the optical sensor data to produce plural-bit data corresponding to the machine-readable indicia as taught by Rhoads so as to enhance the security associated with the user of photo ID documents by supplementing the photographic image with encoded information thereby facilitating the correlation of the photographic image with other information concerning the person, such as the printed information appearing on the document.

As to claims 12, 13, Rhoads teaches the machine-readable indicia is hidden in artwork which comprises a photograph (e.g., col. 6, lines 58-63).

As to claim 14, Dougherty teaches the multi-bit data (digital information) is associated with an internet address (e.g., col. 4, lines 39-46), and the system includes a display (40) for presenting image data downloaded from the internet address.

As to claims 15, 16, Dougherty teaches the peripheral device includes a user interface control (on/off switch 18) and the device is in operation when the switch is activated by a user (e.g., col. 6, lines 16-20), Rhoads teaches perform the steganographic decoding process, therefore Dougherty as modified by Faulkerson and Rhoads would performing the steganographic decoding process only when the control is activated by a user as claimed.

As to claim 17, Dougherty teaches the peripheral device having a decoder (14); therefore, Dougherty as modified by Faulkerson and Rhoads teaches the steganographic decoding is performed by apparatus within the peripheral.

As to claim 18, Dougherty teaches the data from the decoder is transmitted by wireless

transmission to an apparatus remote from the peripheral (col. 5, lines 20-28).

6.   Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Dougherty and Faulkerson and Rhoads as applied to claim10 above, and further in view of

Shellhammer et al (US. PAT. NO. 5,635,697 hereinafter Shellhammer).

As to claim 19, Dougherty as modified by Faulkerson and Rhoads does not disclose the

steganographic decoding is performed on the data in a apparatus remote from the peripheral.

However, Shellhammer teaches the digital data can be decoded by a decoder located in the

scanner or can be decoded by the host computer (232 in Fig. 3C) which is remote from the

scanner (col. 6, lines 39-42). Thus it would have been obvious to one of ordinary skill in the art

at the time the invention was made to modify Dougherty as modified by Faulkerson and Rhoads

to perform the decoding in a apparatus remote from the peripheral as taught by Shellhammer to

reduce the circuitry in the peripheral and to provide a light weight hand-held peripheral.

As to claim 20, Dougherty teaches the data is transmitted by wireless transmission.

Therefore, Dougherty as modified by Faulkerson and Rhoads and Shellhammer would transfer

the data from the peripheral to the remote apparatus by wireless transmission.

7.   Claims 8, 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dougherty

and Faulkerson, and further in view of Nixon et al ("256 x 256 QCMOS Active Pixel Sensor

Camera-on-a Chip", pages 2046-2050, 12/1996, hereinafter Nixon).

As to claim 8, Dougherty as modified by Faulkerson does not disclose the circuitry is

integrated on a common substrate with the sensing elements. However, Nixon teaches the CCD

sensing elements are integrated on a circuit chip to provide a high degree of electronics

integration on the focal-plane to enable the simplification and miniaturization of instrument

system thereby leading to overall lower power and cost (see the introduction on page 2046).

Thus it would have been obvious to one of ordinary skill in the art at the time the invention was

made to modify the circuitry of Dougherty as modified by Faulkerson to be integrated on a

common substrate with the sensing elements as taught by Nixon for producing imaging system

that can be manufactured with low cost, low power and with excellent imaging quality.

As to claim 24, Dougherty teaches the multi-bit data (digital information) is associated

with an internet address (col. 4, lines 39-46), and the system includes a display (40) for

presenting image data downloaded from the internet address.

8.   Claims 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dougherty

Faulkerson and Nixon as applied to claim 8 above, and further in view of Rhoads.

As to claim 21, Dougherty as modified by Faulkerson and Nixon does not disclose the

machine-readable indicia comprising a steganographically encoded to convey multi-bit binary

data. However, Rhoads teaches a printed material comprising a steganographically-encoded

information, and a scanner having a circuitry comprises a decoder for discerning

steganographically-encoded information represented in the image signal (e.g., col. 6 line 44 to

col. 8, line 5) for security purposes. Thus it would have been obvious to one of ordinary skill in

the art at the time the invention was made to modify the machine-readable indicia of Dougherty

as modified by Faulkerson and Nixon to have the steganographically encoded data as taught by

Rhoads so as to enhance the security associated with the user of photo ID documents by

supplementing the photographic image with encoded information thereby facilitating the

correlation of the photographic image with other information concerning the person, such as the

printed information appearing on the document.

As to claim 22, Rhoads teaches the artwork comprises s photograph.

As to claim 23, Dougherty teaches the peripheral device includes a user interface control

(on/off switch 18) and the device is in operation when the switch is activated by a user (col. 6,

lines 16-20), Rhoads teaches performing the steganographic decoding process, therefore

Dougherty as modified by Faulkerson, Nixon and Rhoads would perform the steganographic

decoding process only when the control is activated by a user as claimed.

Response to Arguments

9.   Applicant's arguments with respect to claims 1, 3-5, 8-10, 12-24 have been considered

but are moot in view of the new ground(s) of rejection.

Applicant's remarks regarding Faulkerson on pages 6-8 are not persuasive. Claim 4

requires "the circuitry within said housing analyzes the image signals and produces multi-bit

information corresponding thereto". Faulkerson discloses "the video processor 30 is embodied in

one or more integrated circuits contained within the housing of the hand-held device 20" (col. 4,

lines 32-34). Faulkerson also discloses "The video processor 30 controls the camera exposure

control function and performs correlation functions on the successive frames of the video data to

provide a sequence of edited video data frames or frame segments, in the form of a data packet

for each frame or frame segment, therein duplicative character data have been removed from the edited frames" (co. 4, lines 21-28) and "The output of the processor 30 comprises a digital bit stream of packets of video image data and associated device status data packets" (col. 4, lines 35-37). Therefore, Faulkerson teaches "the circuitry within said housing analyzes the image signals and produces multi-bit information corresponding thereto" as claimed.

Conclusion

10.   Applicant's submission of an information disclosure statement under 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p) on 12/22/03 prompted the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 609(B)(2)(i). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

11.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Regina Liang whose telephone number is (703) 305-4719. The examiner can normally be reached on Monday-Friday from 9AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe, can be reached on (703) 305-4709. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

REGINA LIANG
PRIMARY EXAMINER
ART UNIT 2674

RL
2/13/04